

REMARKS/ARGUMENTS

The amendments set out above and the following remarks are believed responsive to the points raised by the Office Action dated March 27, 2006. In view of the amendments set out above and the following remarks, reconsideration is respectfully requested.

The Pending Claims

Claims 2 and 3 have been canceled, and claims 1 and 4-6 remain pending.

The Office Action

Claims 1-3 were rejected under 35 U.S.C. 103(a) as being unpatentable over Prasad, U.S. Patent No. 4,459,263 (hereinafter referred to as "Prasad '263") in view of Prasad et al., US 2002/0004018 (hereinafter referred to as "Prasad '018") and German Published Patent Application DE 4123606 (hereinafter referred to as "DE '606").

Claims 4-6 were rejected under 35 U.S.C. 103(a) as being unpatentable over Prasad '263 in view of Prasad '018 and DE'606 and further in view of U.S. Patent No. 5,799,386 to Ingersoll et al. (hereinafter referred to as "Ingersoll et al.").

Each of these rejections is respectfully traversed.

The Office Action stated that the arguments made by Applicant in the response of January 3, 2006, were unpersuasive because the claim language did not preclude the addition of elements outside of Applicant's claimed composition. The language of claim 1 has been amended to replace "substantially comprising of" with --consisting of--, thereby precluding the addition of elements outside of Applicant's claimed composition. Additionally, claims 2 and 3 have been canceled.

The alloy according to amended claim 1 is quite different from the alloy disclosed by Prasad '263. Amended claim 1 relates to a "nonprecious" metal dental casting alloy "consisting of" 25 - 35 wt% Cr, 2 - 6 wt% Mo, 3 - 12 wt% W, 0.8 - 1.5 wt% Si, up to 0.3 wt% Mn, 0.1 - 0.35 wt% N, <0.1 wt% Ni, 0.2 - 1.5 wt% Ta, and manufacturing impurities of <0.1 wt% in each case, wherein the remainder is cobalt, and the content of tungsten (W) is always greater than the content of molybdenum.

Prasad '263, on the other hand, *requires* the presence of *both* ruthenium (a noble metal) and aluminum (*see, e.g.*, col. 2, lines 36-38). Prasad '263 teaches alloys having ruthenium in the range of from 5 to 15 % (*see, e.g.*, col. 2, line 61; col. 3, line 19, and col. 5, Table II).

Thus, Prasad '263, in teaching 5-15% ruthenium, a noble metal, is following a different concept, and relates to a different alloy, than Applicant, who is claiming a nonprecious alloy that, if it even contained ruthenium, could only include it as an impurity with a proportion of less than 0.1 wt%. For this reason alone, it is respectfully submitted that a *prima facie* case of obviousness has not been established.

While the Office Action refers to alloy 6 in Prasad '263, and it is noted that alloy 6 does not include aluminum, it does have a ruthenium content of 10%. Alloy 6 is additionally very different from the instantly claimed alloy in that alloy 6:

- (a) does not include Si in the range of 0.8 to 1.5 wt%;
- (b) does not include N in the range of 0.1 to .35 wt%;
- (c) contains gallium in an amount of 0.5% by weight;
- (d) contains boron in an amount of 0.17% by weight;
- (e) contains iron in an amount of 1% by weight; and
- (f) contains copper in an amount of 1% by weight.

Since Applicant's claimed alloy includes (a) and (b), and Prasad '263 does not, and since Applicant's claimed alloy includes "manufacturing impurities of <0.1 wt% in each case," and each of (c), (d), (e) and (f) of Prasad '263 is *far greater* than 0.1 wt%, this reinforces the great differences between the alloy of Prasad '263 and that of Applicant.

While Prasad '263 does refer to cobalt, chromium, and molybdenum, the only disclosure of tungsten combined with molybdenum anywhere in Prasad '263 is with respect to alloy 6, which does not contain aluminum. However, Prasad '263 makes clear that aluminum is a *required component* of the inventive alloy. In this context, it is important to note that alloy 6 is provided as a comparative example, i.e., to show that it is "undesirable" (col. 5, line 65) compared to Prasad '263's inventive alloy. Thus, one of ordinary skill in the art recognizes that Prasad '263, in repeatedly stressing the importance of ruthenium and aluminum, relates to a very different alloy than the alloy according to amended claim 1.

Prasad '018 also teaches an alloy that is very different that that according to amended claim 1. For example, Prasad '018, like Prasad '263, teaches a noble metal alloy. Prasad '018 requires gold (*see, e.g.*, col. 2, paragraph [0007]), and Table 1 refers to gold in the alloy in ranges of 15-85 wt%, 20-70 wt%, and 30-50 wt%.

The gold content in the alloy taught by Prasad '018 makes it rather costly, and one of ordinary skill in the art would not be led to combine the noble metal alloy taught by Prasad '263 with the noble metal alloy taught by Prasad '018 to provide the nonprecious metal casting alloy according to amended claim 1. Moreover, for the reasons set forth above, the compositional ranges of Prasad '263 and Prasad '018 do not overlap those claimed by Applicant, and thus, a *prima facie* case of obviousness has not been established.

DE '606 also relates to a different alloy than that claimed by Applicant, as explained in the instant specification in the paragraph bridging pages 3 and 4. For example, DE '606 discloses an alloy that *must contain* rare-earth elements to an extent from 0.15 to 0.35 wt%. Moreover, the alloy taught by DE '606 *requires* more molybdenum than tungsten, which is the *opposite* of Applicant's claimed ratio.

In summary, the nonprecious metal dental casting alloy according to amended claim 1 is patentably distinct from dental alloy of Prasad '263 for the reasons set forth above. The fact that Prasad '018 (that, like Prasad '263 teaches metal alloys) may teach using Si and Ta is of no import. Prasad '018 simply does not cure the deficiencies of Prasad '263, and therefore, the combination also fails to render the present invention obvious. Similarly, the fact that DE '606 may teach using N is of no import, as DE '606 also fails to remedy the deficiencies of Prasad '263 and Prasad '018, and therefore, the combination also fails to render the present invention obvious.

It is noted that the Office Action, in rejecting dependent claims 4-6, cites Ingersoll et al. for teaching casting methods.

However, the fact that Ingersoll et al. may teach casting methods is of no import, as Ingersoll et al. fails to remedy the deficiencies of Prasad '263, Prasad '018, and DE '606, and therefore, the combination also fails to render the present invention obvious.

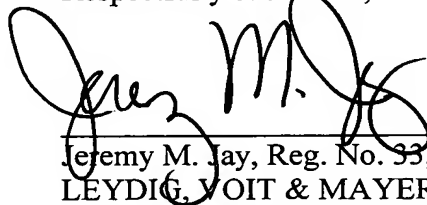
Thus, since independent claim 1 is allowable for the reasons set forth above, dependent claims 4-6 are allowable as they depend from the novel and non-obvious independent claim 1.

For the reasons set forth above, reconsideration of the rejections is respectfully requested.

Conclusion

Applicant respectfully submits that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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Date: 10 July 2006

Amendment or ROA - Final (Revised 2006 06 26)